



pos	rbase	asn _base	HA001 v_mt2	HA002 v_mt2	HA003 v_mt2	HA007 v_mt2	IB013 v_mt2	IGF002 v_mt2	IGF005 v_mt2	IGF007 v_mt2	HA001 v_mt2	YR019
15849	C	c	C	T	C	T	C	C	C	C	C	C
15883	G	g	G	G	G	G	G	G	A	G	G	G
15902	A	a	A	A	A	A	A	A	G	A	A	A
16093	T	t	T	T	T	T	C	T	T	T	T	T
16111	T	c	C	C	C	C	C	C	C	C	C	C
16114	C	c	A	C	C	C	C	A	C	C	C	C
16124	T	t	t	T	T	T	T	T	C	T	T	T
16126	T	t	t	T	T	T	T	T	T	T	C	T
16129	G	g	A	G	A	G	G	G	G	G	G	G
16145	G	g	G	G	G	G	G	A	G	G	G	G
16148	C	c	C	C	T	C	C	C	C	C	C	C
16264	C	c	C	C	C	T	c	C	C	C	c	C
16278	C	c	T	T	C	T	t	T	T	t	T	T
16290	T	c	C	C	C	C	t	C	C	t	c	c
16318	A	a	A	G	a	A	A	A	A	A	A	A
16319	A	g	G	G	g	G	G	G	G	G	G	G
16354	C	c	T	C	C	C	C	T	C	C	C	C
16362	C	t	T	T	C	T	T	T	C	T	T	T
16390	G	g	A	a	G	a	G	A	G	A	A	A
16519	T	t	T	T	C	T	c	T	C	C	C	C

IN THE CLAIMS:

Please cancel claims 11-14.

B2 sub (1) 1. (Twice Amended) A segment of human mitochondrial DNA or RNA of between 10 and 100 bases including any one of the polymorphic sites shown in Table 1, wherein the polymorphic site within the segment is occupied by a base other than the base shown in Table 1, column 3 ("asn base") or the perfect complement of the segment.

B3 sub (2) 4. (Twice Amended) An allele-specific oligonucleotide that is perfectly complementary to a segment of human mitochondrial nucleic acid or its perfect complement including a polymorphic site shown in Table 1, column 1, wherein the polymorphic site within the segment is occupied by a base other than the base shown in Table 1, column 3 ("asn" base).

B4 5. (Amended) The allele-specific oligonucleotide of claim 4 that is a probe.

6. (Amended) The allele-specific oligonucleotide of claim 4, wherein a central position of the probes aligns with the polymorphic site of the fragment.

64  
C3

7. (Amended) The allele-specific oligonucleotide of claim 4 that is a primer.

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B5  
S4  
C3

9. (Twice Amended) An isolated nucleic acid comprising a segment of at least 10 contiguous bases from SEQ ID NO: 30, or the perfect complement thereof, including a polymorphic site shown in Table 1, wherein the polymorphic site within the segment is occupied by a base other than the base shown in Table 1, column 3 ("asn base").

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Please add the following claims

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B6

15. The segment of claim 1, wherein the polymorphic site is at a position selected from the group consisting of 64, 73, 93, 182, 195, 235, 247, 297, 316, and 325.

16. The segment of claim 1, wherein the polymorphic site is at a position selected from the group consisting of 663, 680, 709, 769, 825, 1018, 1040, 1048, 1442, and 1706.

17. The segment of claim 1, wherein the polymorphic site is at a position selected from the group consisting of 1736, 2358, 2416, 2758, 2789, 2885, 3010, 3200, 3336, and 3337.

18. The segment of claim 1, wherein the polymorphic site is at a position selected from the group consisting of 3450, 3516, 3594, 3648, 3666, 3745, 3866, 3918, 4104, and 4158.

19. The segment of claim 1, wherein the polymorphic site is at a position selected from the group consisting of 4248, 4312, 4586, 4767, 4824, 4967, 5027, 5096, 5147, and 5231.

20. The segment of claim 1, wherein the polymorphic site is at a position selected from the group consisting of 5252, 5285, 5331, 5460, 5603, 5773, 5814, 5823, 5912, and 6071.

21. The segment of claim 1, wherein the polymorphic site is at a position selected from the group consisting of 6150, 6237, 6253, 6527, 6614, 6663, 6713, 6806, 6827 and 6875.

22. The segment of claim 1, wherein the polymorphic site is at a position selected from the group consisting of 7146, 7175, 7256, 7274, 7389, 7518, 7521, 7624, 7771, and 8027.

23. The segment of claim 1, wherein the polymorphic site is at a position selected from the group consisting of 8080, 8206, 8387, 8428, 8468, 8503, 8566, 8655, 8701 and 8784.

24. The segment of claim 1, wherein the polymorphic site is at a position selected from the group consisting of 8794, 8854, 8877, 9042, 9072, 9221, 9347, 9449, 9818 and 10031.

25. The segment of claim 1, wherein the polymorphic site is at a position selected from the group consisting of 10115, 10321, 10373, 10586, 10664, 10688, 10793, 10810, 10828, and 10873.

26. The segment of claim 1, wherein the polymorphic site is at a position selected from the group consisting of 10915, 11164, 11176, 11641, 11654, 11800, 11914, 11944, 12007, and 12049.

27. The segment of claim 1, wherein the polymorphic site is at a position selected from the group consisting of 12115, 12236, 12354, 12477, 12720, 12777, 12810, 12948, 13105 and 13149.

28. The segment of claim 1, wherein the polymorphic site is at a position selected from the group consisting of 13184, 13203, 13276, 13485, 13506, 13590, 13650, 13789, 13803 and 13914.

29. The segment of claim 1, wherein the polymorphic site is at a position selected from the group consisting of 13958, 13966, 14000, 14059, 14178, 14308, 14407, 14560, 14566 and 14911.

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